

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An antivibration device, ~~of the type~~ comprising:

at least two sets (2, 3) each comprising two identical rotors (4, 5; 6, 7) having respective eccentric flyweights (4A, 5A; 6A, 7A), said sets being disposed symmetrically about an axis of symmetry, and ~~[[the]]~~ axes of rotation of said rotors being parallel to one another and orthogonal to said axis of symmetry;~~r~~
and

a drive system (8) for setting said rotors into rotation;~~[[,]]~~

~~the device being characterized:~~

~~in that it comprises~~

controllable moving equipment (11) carrying said drive system (8) and capable of sliding along said axis of symmetry to vary ~~[[the]]~~ a phase offset between the eccentric flyweight rotors of the sets,~~r~~ and said

~~in that said drive system (8) comprises~~ comprising a single motor (12) for rotating said rotors, having its axis disposed perpendicularly to said axis of symmetry, and driving an endless connection passing around said rotors (4, 5; 6, 7) so

that ~~[[the]]~~ a plurality of lengths of ~~[[the]]~~ strands of the connection passing through said sets are equal.

2. (currently amended) ~~[[A]]~~ The device according to claim 1, ~~characterized in that the~~ wherein a phase offset ϕ between the eccentric flyweight rotors disposed symmetrically facing each other (4, 6; 5, 7) about the axis of symmetry is equal to $2d/r$, where d corresponds to the linear displacement of said moving equipment (11) along said axis of symmetry, and r corresponds to ~~[[the]]~~ an identical winding radius of the endless connection about the centers of said rotors.

3. (currently amended) ~~[[A]]~~ The device according to claim 1, ~~characterized in that the~~ wherein a linear displacement stroke of said moving equipment (11) is defined by two extreme positions, a first position in which the phase offset between the eccentric flyweight rotors is zero, and a second position in which the phase offset is equal to 180° .

4. (currently amended) ~~[[A]]~~ The device according to claim 1, ~~characterized in that it~~ wherein said device includes at least one servo-motor (19) for servo-controlling ~~[[the]]~~ a position of said moving equipment (11), a plurality of sensors measuring the positions of said rotors for ~~[[the]]~~ a purpose of calculating the

phase offset between said sets, and a relationship for regulating and servo-controlling rotation of said single motor (12).

5. (currently amended) [[A]] The device according to claim 1, ~~characterized in that~~ wherein said controllable moving equipment (11) is a carriage (18) sliding along said axis of symmetry and supporting said single motor (12).

6. (currently amended) [[A]] The device according to claim 1, ~~characterized in that~~ wherein said endless connection (14) is a belt that winds around a plurality of pulleys (15) that are mounted on the axes of said rotors, and of said single motor, which pulleys are contained in a common plane.

7. (currently amended) [[A]] The device according to claim 6, ~~characterized in that~~ wherein said belt (14) is a cog belt and co-operates with corresponding teeth (15A) formed on said pulleys (15).

8. (currently amended) [[A]] The device according to claim 1, ~~characterized in that~~ wherein said controllable moving equipment (11) also includes at least one tensioning wheel (17) for tensioning said endless connection (14).

9. (currently amended) [[A]] The device according to claim 1, ~~characterized in that~~ wherein the two sets (2, 3) are carried by a frame (9) suitable for being secured to a vibrating structure, said controllable moving equipment (11) being slidably mounted on said frame (9) to slide along the axis of symmetry of the two sets (2, 3).

10. (currently amended) [[A]] The device according to claim 1, ~~characterized in that~~ wherein for each set (2, 3) of rotors, it includes an intermediate rotary wheel (16) co-operating with said endless connection (14) to ensure that the two rotors are driven in contrarotation, the two rotary wheels (16) being arranged on [[said] a frame (9) and being disposed respectively on either side of said axis of symmetry.

11. (currently amended) [[A]] The device according to claim 2, ~~characterized in that~~ wherein the linear displacement stroke of said moving equipment (11) is defined by two extreme positions, a first position in which the phase offset between the eccentric flyweight rotors is zero, and a second position in which the phase offset is equal to 180°.

12. (new) The device according to claim 1, wherein the single motor (12) is disposed between the two sets (2,3).

13. (new) An antivibration device, comprising:

two sets (2, 3) each comprising two identical rotors (4, 5; 6, 7) having respective eccentric flyweights (4A, 5A; 6A, 7A), said sets being disposed symmetrically about an axis of symmetry, and axes of rotation of said rotors being parallel to one another and orthogonal to said axis of symmetry;

a drive system (8) for setting said rotors into rotation;

controllable moving equipment (11) carrying said drive system (8) and capable of sliding along said axis of symmetry to vary a phase offset between the eccentric flyweight rotors of the sets, said drive system (8) comprising a single motor (12) for rotating said rotors, the single motor (12) being disposed between the two sets and having its axis disposed perpendicularly to said axis of symmetry, and driving an endless connection passing around said rotors (4, 5; 6, 7) so that a plurality of lengths of strands of the connection passing through said sets are equal.

14. (new) The device according to claim 13, wherein a phase offset ϕ between the eccentric flyweight rotors disposed symmetrically facing each other (4, 6; 5, 7) about the axis of symmetry is equal to $2d/r$, where d corresponds to the linear displacement of said moving equipment (11) along said axis of symmetry, and r corresponds to an identical winding radius of the endless connection about the centers of said rotors.

15. (new) The device according to claim 13, wherein a linear displacement stroke of said moving equipment (11) is defined by two extreme positions, a first position in which the phase offset between the eccentric flyweight rotors is zero, and a second position in which the phase offset is equal to 180° .

16. (new) The device according to claim 13, wherein said device includes at least one servo-motor (19) for servo-controlling a position of said moving equipment (11), a plurality of sensors measuring the positions of said rotors for a purpose of calculating the phase offset between said sets, and a relationship for regulating and servo-controlling rotation of said single motor (12).

17. (new) The device according to claim 13, wherein said controllable moving equipment (11) is a carriage (18) sliding along said axis of symmetry and supporting said single motor (12).

18. (new) The device according to claim 13, wherein said endless connection (14) is a belt that winds around a plurality of pulleys (15) that are mounted on the axes of said rotors, and of said single motor, which pulleys are contained in a common plane.

19. (new) The device according to claim 18, wherein said belt (14) is a cog belt and co-operates with corresponding teeth (15A) formed on said pulleys (15).

20. (new) The device according to claim 13, wherein said controllable moving equipment (11) also includes at least one tensioning wheel (17) for tensioning said endless connection (14).